

Application No.: 10/780,747
Preliminary Amendment
Reply to Office Action dated November 16, 2007
April 10, 2008

IN THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers, respectively:

Claim 1 (Currently amended): A mobile terminal device having a route guiding function of guiding along a route by obtaining map information ~~form~~ from a server system via a radio communication network, comprising:

a position detecting unit which detects a current position of the mobile terminal device;

a bearing detecting unit which detects a first bearing to which the mobile terminal device is directed;

a map information acquiring unit which transmits predetermined specific information to identify a destination and positional information of a current position to the server system, and acquires map information on a section containing the destination and the current position from the server system;

a target bearing calculating unit which calculates a second bearing from a current position to the destination based on the

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positional information and the predetermined specific
information;

a judging unit that judges whether a difference between the first bearing and the second bearing is less than or greater than a predetermined value, or is equal to the predetermined value;

a displaying unit which displays a map based on the map information acquired from said map information acquiring unit, displays predetermined icon images at a position of the destination and the current position respectively, and displays an icon image indicating the first bearing; and

a target capturing unit which produces ~~different sound effects in response to a result of the judging unit~~ a first melody when the judging unit judges that the difference is less than the predetermined value, produces a second melody when the judging unit when the judging unit judges that the difference is greater than the predetermined value, and produces no melody when the judging unit judges that the difference is equal to the predetermined value.

Claim 2 (Cancelled):

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Claim 3 (Previously presented): The mobile terminal device having a route guiding function according to claim 1, wherein the target capturing unit blinks the icon image displayed at the position of the destination when the first bearing coincides with the second bearing.

Claim 4 (Currently amended): A mobile terminal device having a route guiding function of guiding along a route by obtaining map information from a server system via a radio communication network, comprising:

a position detecting unit which detects a current position of the mobile terminal device;

a bearing detecting unit which detects a first bearing to which the mobile terminal device is directed;

a map information acquiring unit which transmits predetermined specific information to identify a destination and positional information on a current position to the server system, and acquires map information of a section containing the destination and the current position from the server system;

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a target bearing calculating unit which calculates a second bearing from the current position to the destination based on the positional information and the specific information;

a judging unit that judges whether a difference between the first bearing and the second bearing is less than or greater than a predetermined value, or is equal to the predetermined value;

a displaying unit which displays a map based on the map information acquired from said map information acquiring unit, displays a predetermined icon image at the current position, and displays an icon image indicating the first bearing and an icon image indicating the second bearing; and

a target capturing unit which produces ~~different sound effects in response to a result of the judging unit~~ a first melody when the judging unit judges that the difference is less than the predetermined value, produces a second melody when the judging unit when the judging unit judges that the difference is greater than the predetermined value, and produces no melody when the judging unit judges that the difference is equal to the predetermined value.

Claim 5 (Cancelled):

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Claim 6 (Currently amended): A route guiding method utilizing a mobile terminal device including a position detecting unit for detecting a current position of the mobile terminal device and a bearing detecting unit for detecting a first bearing to which the mobile terminal device is directed to the mobile terminal device, and a server system, to which the mobile terminal device is connected via a radio communication network and which stores a map database including map information including map image data and information to identify a position on a map, the method comprising the steps of:

causing the server system to execute the steps of,

searching the map information containing a destination and the current position from the map database based on positional information of the current position and specific information of the destination which are transmitted from the mobile terminal device, and

sending the map information obtained in said step of searching the map information to the mobile terminal device; and

causing the mobile terminal device to execute the steps of,

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transmitting the specific information designated by a user to the server system,

transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

calculating a second bearing from the current position to the destination based on the positional information and the specific information,

judging whether a difference between the first bearing and the second bearing is less than or greater than a predetermined value, or is equal to the predetermined value;

displaying a map based on the map information acquired in said step of searching the map information, displaying predetermined icon images to overlap with a position of the destination and the current position, and displaying an icon image indicating the first bearing, and

~~producing different sound effects in response to a result of said step of judging~~ a first melody when the judging unit judges that the difference is less than the

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predetermined value, produces a second melody when the
judging unit when the judging unit judges that the
difference is greater than the predetermined value, and
produces no melody when the judging unit judges that the
difference is equal to the predetermined value.

Claim 7 (Currently amended): A route guiding method
utilizing a mobile terminal device including a position detecting
unit for detecting a current position of the mobile terminal
device and a bearing detecting unit for detecting a first bearing
to which the mobile terminal device is directed to the mobile
terminal device, and a server system, to which the mobile
terminal device is connected via a radio communication network
and which stores a map database including map information
including map image data and information to identify a position
on a map, the method comprising the steps of:

causing the server system to execute the steps of,

searching the map information containing a destination
and the current position from the map database, based on
positional information of the current position and specific

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information of the destination which are transmitted from the mobile terminal device, and

sending the map information obtained in said step of searching the map information to the mobile terminal device; and

causing the mobile terminal device to execute the steps of

transmitting the specific information designated by a user to the server system,

transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

calculating a second bearing from the current position to the destination based on the positional information and the specific information,

judging whether a difference between the first bearing and the second bearing is less than or greater than a predetermined value, or is equal to the predetermined value;

displaying a map based on the map information acquired in said step of searching the map information, displaying a

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predetermined icon image at the current position, and
displaying an icon image indicating the first bearing and an
icon image indicating the second bearing, and

~~producing different sound effects in response to a
result of said step of judging a first melody when the
judging unit judges that the difference is less than the
predetermined value, produces a second melody when the
judging unit when the judging unit judges that the
difference is greater than the predetermined value, and
produces no melody when the judging unit judges that the
difference is equal to the predetermined value.~~

Claim 8 (Currently amended): A computer readable recording
medium storing a program for guiding along a route with utilizing
a mobile terminal device including a position detecting unit for
detecting a current position of the mobile terminal device and a
bearing detecting unit for detecting a first bearing to which the
mobile terminal device is directed to the mobile terminal device,
and a server system, to which the mobile terminal device is
connected via a radio communication network and which stores a

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map database including map information including map image data
and information to identify a position on a map, wherein

the program causes the server system to execute the steps
of,

searching the map information containing a destination
and the current position from the map database based on
positional information of the current position and specific
information of the destination which are transmitted from
the mobile terminal device, and

sending the map information obtained in said step of
searching the map information to the mobile terminal device;
and

the program causes the mobile terminal device to execute the
steps of,

transmitting the specific information designated by a
user to the server system,

transmitting the positional information of the current
position detected by the position detecting unit to the
server system,

receiving the map information sent from the server
system,

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calculating a second bearing from the current position to the destination based on the positional information and the specific information,

judging whether a difference between the first bearing and the second bearing is less than or greater than a predetermined value, or is equal to the predetermined value;

displaying a map based on the map information acquired in said step of searching the map information, displaying predetermined icon images to overlap with a position of the destination and the current position, and displaying an icon image indicating the first bearing, and

~~producing different sound effects in response to a result of said step of judging~~ a first melody when the judging unit judges that the difference is less than the predetermined value, produces a second melody when the judging unit judges that the difference is greater than the predetermined value, and produces no melody when the judging unit judges that the difference is equal to the predetermined value.

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Claim 9 (Currently amended): A computer readable recording medium storing a program for guiding along a route with utilizing a mobile terminal device including a position detecting unit for detecting a current position of the mobile terminal device and a bearing detecting unit for detecting a first bearing to which the mobile terminal device is directed to the mobile terminal device, and a server system, to which the mobile terminal device is connected via a radio communication network and which stores a map database including map information including map image data and information to identify a position on a map, wherein

the program causes the server system to execute the steps of,

searching the map information containing a destination and the current position from the map database, based on positional information of the current position and specific information of the destination which are transmitted from the mobile terminal device, and

sending the map information obtained in said step of searching the map information to the mobile terminal device; and

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the program causes the mobile terminal device to execute the steps of,

transmitting the specific information designated by a user to the server system,

transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

calculating a second bearing from the current position to the destination based on the positional information and the specific information,

judging whether a difference between the first bearing and the second bearing is less than or greater than a predetermined value, or is equal to the predetermined value;

displaying a map based on the map information acquired in said step of searching the map information, displaying a predetermined icon image at the current position, and displaying an icon image indicating the first bearing and an icon image indicating the second bearing, and

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~~producing different sound effects in response to a~~
~~result of said step of judging a first melody when the~~
~~judging unit judges that the difference is less than the~~
~~predetermined value, produces a second melody when the~~
~~judging unit when the judging unit judges that the~~
~~difference is greater than the predetermined value, and~~
~~produces no melody when the judging unit judges that the~~
~~difference is equal to the predetermined value.~~

Claim 10 (Previously presented): The mobile terminal device having a route guiding function according to claim 1, further comprising a relative bearing calculating unit which calculates the difference between the first bearing and the second bearing.

Claim 11 (Previously presented): The mobile terminal device having a route guiding function according to claim 4, further comprising a relative bearing calculating unit which calculates the difference between the first bearing and the second bearing.

Claim 12 (Previously presented): The route guiding method utilizing a mobile terminal device according to claim 6, further

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comprising the step of: calculating a relative bearing which is the difference between the first bearing and the second bearing.

Claim 13 (Previously presented): The computer readable recording medium storing a program for guiding along a route with utilizing a mobile terminal device according to claim 8, further comprising the step of: calculating a relative bearing which is the difference between the first bearing and the second bearing.

Claim 14 (Cancelled):

Claim 15 (Previously presented): The mobile terminal device having a route guiding function according to claim 10, further comprising means for displaying another icon image indicating the second bearing on said displaying unit.

Claim 16 (Cancelled):

Claim 17 (Previously presented): The mobile terminal device having a route guiding function according to claim 1, wherein the position information of the current position is indicated by a

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latitude A of the current position and a longitude B of the current position, and the predetermined specific information to identify a destination is indicated by a latitude C of the destination and a longitude D of the destination; and

wherein the second bearing is calculated by a formula: $\theta = \arctan \frac{\text{latitude C} - \text{latitude A}}{\text{longitude D} - \text{longitude B}}$.

Claim 18 (Previously presented): The mobile terminal device having a route guiding function according to claim 4, wherein the position information of the current position is indicated by a latitude A of the current position and a longitude B of the current position, and the predetermined specific information to identify a destination is indicated by a latitude C of the destination and a longitude D of the destination; and

wherein the second bearing is calculated by a formula: $\theta = \arctan \frac{\text{latitude C} - \text{latitude A}}{\text{longitude D} - \text{longitude B}}$.